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The Iowa Ornithologists' Union was organized at Ames, Iowa, February 28, 1923, for the study and protection of native birds and to promote fraternal relations among Iowa bird students.

The central design of the Union's official seal is the Eastern Goldfinch, designated State Bird of Iowa in 1933.

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THE 1934 DROUGHT AND SOUTHERN IOWA BOB-WHITE*

By PAUL L. ERRINGTON

"Drought, if extreme, may cause a wholesale loss of eggs partly because of desertion and partly because the eggs spoil after a premature incubation begun by the intense heat." (Stoddard, 1931, p. 185).

Leopold and Ball (1931) have pointed out some of the apparent consequences of a drought season to Bob-white populations in the southern parts of the North Central Region. Gambel Quail coveys of the Southwest have been observed not to pair off and nest during drought periods (Leopold, 1933, p. 28). Leopold (1933, pp. 297-299) further discusses drought and Bob-white.

In Iowa, we obtained few data on the actual nesting of Bob-white during the 1934 drought season, but we may be entitled to some idea of the probable fate of quail nests on the basis of our current studies of Hungarian Partridges, Ring-necked Pheasants, and waterfowl in the northwestern part of the state.

For example, F. N. Hamerstrom, Jr., working on observational areas in the vicinity of Ruthven (where the drought was of shorter duration and of less severity than over much of southern Iowa), found that the hatch of pheasant nests was very poor during the intensely hot and dry month of June. He frequently recorded at the height of the drought pheasant clutches of 15 to 18 eggs, of which perhaps only two or three young would succeed in completing their hatching, while most of the others would die in their pipped eggs (unpublished). It was no uncommon sight to see pheasant hens with from one to three small chicks instead of the dozen or more usually making up recently hatched broods for this month.

From what is known of moisture and nutritive requirements of small gallinaceous chicks generally, it is not difficult to piece together a picture of tragedy for many of the limited number of dry weather chicks that did manage to get clear of their egg shells. Our picture would be more distinct in detail if we had more data, but data of this sort are not easily secured, and we may have to be satisfied with what fragmentary glimpses may be revealed to us.

Nevertheless, while aware from constant field work and the reports of deputy wardens that the breeding season could not have been overly successful, I scarcely anticipated the quail shortage so obvious in some localities by October and November. The mere fact that an investigator may not discover many nests or see many young birds throughout the summer is not necessarily of great significance; the concealment afforded by leafy vegetation (even when drought-stricken) and the secretive habits of quail chicks and moulting adults might have made substantial populations highly inconspicuous, notably in late summer and early fall. There are typically few birds to be seen at this season, however strong may be the actual population.

Without attempting to present here any detailed data from the 1934 experimental shooting program of the Fish and Game Commission, the generalization may be made that the hunters had more or less trouble finding birds in the forefront of the shooting season (October 15 to November 15) on southern Iowa quail management areas. This was in part due to the density of the cover before the dropping of the leaves facilitated the locating of coveys. Good shooting was had in November on some of the 104 Class A areas experimentally shot

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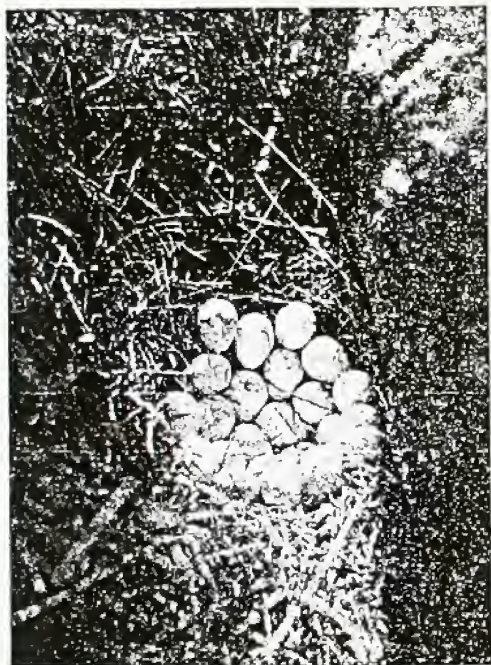
(the majority of which had been subjected to no legal shooting since the total closure on Iowa Bob-white in 1916), but on others the birds simply were not there. By and large, there seemed to be a rough correlation between the 1934 fall quail population and the length and intensity of the drought.

It was not possible to make censuses that were at all reliable numerically until November and December. Censuses on areas under previous observation uniformly indicated with one exception a decrease from the final 1934 spring counts. The most reliable population check-ups for southern Iowa, obtained before the desperate starvation crisis of December, were made on two Davis County areas, one about 10 miles south of Ottumwa and another near Bloomfield. The Ottumwa area

showed evidence of a 1934 fall population of only about 44% of the bird per 5.5 acres surviving the winter of 1933-'34; the Bloomfield area a fall population of about 46% of the bird per 8.7 acre spring survival. Although there had been some 1934 shooting on both of these areas prior to the check-ups, the bag on these two was known to have been so light that it hardly could have had a major effect in further lowering the population to the fall level first measured.

For that matter, all available reports of known reliability point to similarly severe or worse declines on lands not even near those upon which shooting was legally permitted.

The total of 259,282 acres in the 104 Class A areas on which restricted shooting was officially authorized (though the shooting was not always done, in actuality) is the equivalent of less than 12 townships or about three-fourths of an average county. This is a small proportion compared to the proportion of Iowa's "quail country" that shows drastically lowered populations



BOB-WHITE NEST

This shows the general appearance of the eggs, but ordinarily the nest contains a somewhat smaller number of eggs and is more or less concealed beneath tufts of thick dry grass. Photograph by Walter M. Roene, reproduced through courtesy of Iowa State College.

As has been suggested with supporting evidence (Errington, 1934, and unpublished), the normal recovery of Bob-white populations from seasonal increase of young has a way of keeping habitable environment quite well filled up to its natural capacity to accommodate the species, still we have had to deal with highly abnormal conditions the past summer. A relatively inferior hatch may conceivably have made little difference to a population which for years had been up to the usual carrying capacity of the southern counties as a whole.

However, the historically unprecedented drought may not only have reduced the hatch to the extent that it could be called inferior; it

very reasonably seems to have affected Bob-white reproduction so disastrously that there may have been practically no hatch at all over wide areas (there were local exceptions) for the season of 1934. Most of the young birds observed were obviously from late hatches, some late fall broods being made up of young no larger than bumble bees and hence hopelessly immature to meet the winter.

Of course, there may have been factors other than drought and heat to which the abrupt decline in quail might perhaps be ascribed. The known susceptibility of Bob-whites to tularemia or "rabbit fever" and the conspicuously lower numbers of cottontails frequently to be noted after previous local abundance may have some correlation. Occasional reports of sick quail have come in, but we at the State College have been unable to secure the proper specimens for examination. Irrespective of the weakness of definite evidence from this state, the possibility of disease contributing to the decline is not at all remote.

In the neighboring states of Wisconsin and Minnesota, the cyclic drop off of grouse and rabbits is well on the way. We don't know exactly what brings about these periodic cycles in numbers of some wild species—abundance followed by scarcity, with roughly predictable regularity—and we are not too sure that any single factor does it. But we do know that wild populations may suffer wholesale reduction under conditions that evidently rule out hunting, natural enemies, and food shortage as causative factors. The Bob-white has long been thought of as a non-cyclic species subject to irregular rather than to regular fluctuations. There is no question of its being subject to irregular fluctuations associated with climatic and nutritional emergencies, but there is increasing evidence that it may fluctuate periodically as well.

Scientifically, a fully accurate diagnosis of the 1934 Bob-white decline in southern Iowa cannot be made. The situation, complex by the beginning of the winter, was made still more so by the food crisis—a crisis initiated by drought and chinch bugs and rendered acute by deep and persistent snows.

Among the other variables in sight, the effect of the 1934 legal shooting may be judged measurable and slight; the effect of illegal shooting, unmeasurable but probably slight also. We do not know what the role of predation was in bringing about the summer decline but on the basis of the following fall and winter field studies we have had no reason to believe that the dominant relationship of predators to adult quail, at any rate, has been greatly modified from that as previously summarized, namely, that heavy predation upon Bob-white is a symptom rather than a cause of biological unbalance (Errington, 1934; 1935). We cannot even hazard an intelligent guess as to the role of disease or of cyclic population behavior, though it is conceivable that these may be decidedly a part of the equation.

The one factor that appears of supreme importance, everything considered, is the drought, not only from the standpoint of its indirect effect on environment but its almost inevitable direct effect upon the season's Bob-white reproduction. Particularly significant may be the satisfactory quail populations observed in the east-central portion of the state, from Jackson to Louisa Counties where rain occurred "just about as it was needed" (field notes, C. H. Updegraff), contrasted with the "spotty" populations of drought counties such as Davis and Wapello. Indeed, it is not difficult to suspect an actual connection between passages in Updegraff's notes, "Thru June and July . . . better than 30 days that we did not have any dew . . ." and the persistent though usually unverifiable reports of farmers finding quail dead for lack of water.

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BLUE GEESE IN IOWA

By WILLIAM YOUNG WORTH

The Blue Geese, birds of passage through Iowa, each year return from their winter vacation on the coastal marshes of Louisiana, and we find them once more honking the advent of spring to the people of western Iowa. Iowa sportsmen and those only mildly interested in nature are one and all gladdened by the sight of scores of thousands of these trim-appearing birds. The very presence of these birds should be a direct challenge to all true sportsmen to see that the geese are protected while on their annual spring visit to Iowa, so that we can always be thrilled by the sight of great flying wedges of geese in the spring.

WINTER SANCTUARIES

The Blue Geese and their near cousins, the Lesser Snow Geese, winter on the Louisiana marshes. These marshes have been mostly set aside as inviolate winter refuges, and here the birds feed in safety. The principal food is a native grass locally known as "goose grass." The birds often eat the leafy part of the plant, but the roots are the preferred portion and are greedily dug up by the geese.

SPRING MIGRATION

The geese leave the wintering grounds late in February, and often the vanguard reaches southern Iowa during the first week of March. Most of the birds are usually well established along the Missouri River below Sioux City by the 21st of March. A curious fact about the departure from Louisiana is that the geese leave in very small flocks and join ranks somewhere along the route while resting for the night, because when the birds appear in Iowa they are in great flocks.

The general confines of the spring concentration area include the flood plain of the Missouri River between Sioux City and Omaha. A small portion of the geese settle just northwest of Sioux City in South Dakota.

The Blue Geese feed in either hand-picked or machine-picked cornfields and will often stay in the general vicinity of these fields for several weeks. Here they glean the scattered kernels of corn from the ground and go gabbling about much like barnyard fowls. Frequently the geese feed in a cornfield adjacent to a field of winter wheat, and are thus amply supplied with green food to go along with their corn diet.

MIXTURE OF SPECIES

With every flock of Blue Geese are the inevitable Lesser Snow Geese. Many years of observation has brought out the fact that the proportion of Snow Geese in these mixed flocks is slowly increasing. A few years ago there were ten or twelve Blue Geese to every Snow

Goose. Today, actual count has revealed that the ratio is two or three Blue Geese to one Snow Goose. Another point of interest is that there are more hybrid geese to be found in these mixed flocks. These hybrid birds of Blue and Snow Goose parentage are really beautiful birds in their mottled slate-blue and white plumage.

In almost every large gathering of Blue Geese there are a dozen to 50 White-fronted Geese. This distinctly-marked species probably does not interbreed with the Blue Geese, but merely likes to feed in company with the latter birds during migration. The common big Canada Goose does not mingle with the Blue Geese on the Iowa cornfields. The Canada Goose is a wary bird by nature and for this reason does not associate with the rather confiding Blue Goose. However, the intermediate form of the Canada Goose now known as Hutchin's Goose, and which is nearer the size of the Blue Goose, is at times found feeding with this latter goose. It is noticed, however, that Hutchin's Goose when found in these mixed flocks is usually the first goose to take flight.



FLOCKS OF BLUE GEESSE NEAR SIOUX CITY

On March 14 and 18, 1928, flocks of thousands were seen. See articles by Rosene, Bennett and Stephens in "Wilson Bulletin," XL, 1928, pp. 199-200, from which the above photograph is reprinted.

NUMBERS OF BIRDS

It is not uncommon to see ten or fifteen thousand Blue and Snow Geese on their feeding or resting grounds in western Iowa. Perhaps the largest single gathering seen during the spring of 1935 was a mixed flock of nearly 50,000 birds at rest on a pasture in Monona County. Conservative figures based on intensive field work place the number of Blue Geese which rest and feed in this section of the Missouri Valley at about 200,000 birds. In addition there are about 75,000 Lesser Snow Geese migrating with the Blue Geese.

ACTIVITIES

The geese usually spend the night on isolated sand-bars and islands in the Missouri River. Some flocks rest on the mud flats of the oxbow lakes of the region, a few of which still contain water. During wet seasons the geese sometimes apparently spend the night on partially flooded fields.

A general flight to the favorite feeding ground occurs in the morning. After having satisfied their hunger, the birds usually move to an open pasture or hay-field where they rest, sun themselves, preen

their feathers, or playfully chase one another around. The birds feed again during the late afternoon and at dusk leave for the roosting grounds.

FROM IOWA NORTH

April 1st as a rule finds the Blue Geese on their way north and away from the inviting cornfields of Iowa. The migratory 'hop' from Iowa is a rather short one, and many of the geese stop in the Waubay and Traverse Lakes region of northeastern South Dakota and the various nearby North Dakota lakes. The stay here is short and the birds soon leave for Canada, particularly the region about Winnipeg. Here the editor of a Winnipeg newspaper follows his annual custom of chronicling the arrival of the first flock of Blue Geese at this point. A considerable time is spent in the Winnipeg area, and when weather is right the geese leave for the long flight across Hudson Bay. The birds usually reach their breeding grounds in Baffin-Land by mid-June.

NESTS RECENTLY DISCOVERED

The home life of the Blue Goose was a complete mystery until the year 1928, when J. Dewey Soper of the Canadian Department of Interior found nesting Blue Geese on the southwest coast of Baffin-Land. In 1929, Dr. George Miksch Sutton, the well-known bird artist, found numbers of Blue Geese nesting on Southampton Island, near the mouth of Hudson Bay. Thus it is that the home life of Iowa's most interesting waterfowl visitor was only recently brought to light.

FALL MIGRATION

With the breeding season out of the way, and when the geese have acquired their new feathers following the post nuptial moult, the birds begin a general southward movement. The jumping-off place is James Bay at the extreme south end of Hudson Bay where the birds remain until cold weather sends them south. This fall flight is rather different from the spring flight in that most of the geese make a single long-distance trip from James Bay to the Gulf of Mexico. At odd times flocks of birds do stop in some of the east central states for a few days before resuming the southern journey. The Blue Goose is not a migrant through Iowa during the fall except on rare occasions.

MIGRATORY REFUGE NEEDED

A plan for a Migratory Waterfowl Refuge which would include 40,000 acres of land along the Missouri River between Sioux City and Omaha has been submitted to the United States Biological Survey. The selection of this area was made by the Biological Survey Unit of the Iowa State Planning Board. The proposed Refuge includes resting and feeding areas, which if purchased by the Federal Government would permanently protect the Blue Geese during their spring stop-over in Iowa.

A word must be added in appreciation of the splendid work done during the 1935 spring flight by the combined force of deputy game wardens from Iowa, Nebraska, and South Dakota, and the Federal Rangers from the U. S. Biological Survey, who protected these thousands of birds from harm.

OUR THIRTEENTH ANNUAL MEETING

On May 10, 11 and 12, 1935, the joint meeting of the Iowa Ornithologists' Union and the Nebraska Ornithologists Union was held at Sioux City, Iowa. The program was presented in the Hotel Martin ball-room on Friday and Saturday, May 10 and 11. On Sunday, May 12, the annual field trip was taken.

The meeting was a success in every way, the attendance was satis-

factory, and the program was excellent. It was doubtless one of the most important gatherings of leaders in conservation work ever assembled west of the Mississippi River. At this meeting the "Upper Mississippi Valley Wild Life Conservation Conference" was formed. This promises to become a permanent organization.

THE PROGRAM

Friday Morning

The Proposed Lewis and Clark National Park. (20 minutes). E. Dudley Beck, Secy., Lewis and Clark Natl. Park Assn.

Problems and Progress of Bob-White Quail Conservation in Iowa. (30 minutes). Dr. Paul L. Errington, Iowa State College.

Some New Aspects of Wild Life Conservation. (30 minutes). I. T. Bode, Iowa Fish and Game Commission.

The Iowa Twenty-five Year Conservation Plan. (25 minutes). John R. Fitzsimmons, Iowa State Board of Conservation.

Conservation Program of the Iowa State Planning Board. (25 minutes). Philip A. DuMont, Iowa Fish and Game Commission.

Friday Afternoon and Evening

Address of Welcome. Mayor W. D. Hayes of Sioux City.

Organized Conservation Work in Minnesota. (15 minutes). Gustav Swanson, U. S. Soil Erosion Service.

The Game Survey of Missouri. (25 minutes). Dr. Rudolf Bennett, Univ. of Missouri, Columbia, Missouri.

Nebraska's Ten Year Plan of Game Conservation and Management. (30 minutes). Frank B. O'Connell, Game, Forestation & Parks Commission, Lincoln, Nebr.

Some Relations of the Plains Shelterbelt to Wild Life. (25 minutes). John H. Hatton, U. S. Forest Service, Lincoln, Nebr.

Soil Erosion Control Work in Relation to Wild Life. (25 minutes). E. G. Holt, U. S. Soil Erosion Service.

How Can We Save Our Migratory Waterfowl? (20 minutes). John H. Baker, Natl. Assn. of Audubon Societies, New York City.

Relation of Drought and Water Conservation to Wild Life. (35 minutes). Dean G. E. Condra, University of Nebraska. (This lecture was given as the feature of the Conservation Banquet program at 6:30 P. M.)

Saturday Morning

Bird-banding as a Method in Wild Life Study. (20 minutes). Mrs. Marie Dales, Sioux City.

Photography as a Method in Wild Life Study. (20 minutes). Walter M. Rosene, Iowa Fish and Game Commission.

The Role of Territory in the Life History of the Bob-white Quail. (15 minutes). Dr. Paul L. Errington, Iowa State College.

Waterfowl Management in the Prairie Region. (25 minutes). Logan J. Bennett, Iowa Fish and Game Commission.

Stream Pollution—A Fisheries Problem. (20 minutes). Dr. M. M. Ellis, U. S. Bureau of Fisheries.

The Gifford Estate Lands South of Omaha and Council Bluffs as Wild Life Sanctuary Areas. (20 minutes). (Lantern slides). L. O. Horsky, Omaha, Nebr.

Saturday Afternoon and Evening

Gardening with the Birds. (20 minutes). (Lantern slides). Mrs. Addison E. Sheldon, Lincoln, Nebr.

Recording Bird Songs. (15 minutes). Mrs. Lily Button, Fremont, Nebr.

The Policies and Activities of the National Association of Audubon Societies. (15 minutes). John H. Baker, New York City.

Observations on Common South Dakota Birds. (25 minutes). (Lantern slides). Dr. A. V. Arlton, Dakota Wesleyan University.

Wild Flowers of the Missouri River Region. (45 minutes). (Lantern slides). Victor Overman, Omaha, Nebr. (This was followed by a talk by Wier R. Mills, Pierson, Iowa, an authority on wild flowers of this region).

The Seasonal Distribution of the Horned Larks of the Missouri Valley Region. (30 minutes). Prof. M. H. Swenk, University of Nebraska.

Business meeting (at 4:30).

At 6:30 the joint banquet of the two organizations was held, with Dr. Thos. S. Roberts of the University of Minnesota as the principal speaker. W. J. Breckenridge, also of the University of Minnesota, showed moving pictures of the Prairie Chicken, Ruffed Grouse, Canada Spruce Grouse and Prairie Sharp-tailed Grouse. J. N. Ball talked on conservation in South Dakota.

BUSINESS MEETING

The business meeting was necessarily brief. The officers elected for the coming year are as given on the title page of this issue, the only changes being those in the Executive Council. An invitation from the Fairfield Bird Club, for the Union to meet at Fairfield in 1936, was formally accepted. An invitation to meet in Cedar Falls in 1937 was also taken under consideration. The Secretary-Treasurer's report was heard and approved.

RESOLUTIONS

BE IT RESOLVED by the Iowa Ornithologists' Union—

(1) That we hereby express to the Sioux City Bird Club, the Sioux City Chapter of the Izaak Walton League, and the Sioux City Chamber of Commerce, our appreciation of their hospitality and of the plans made by them for the success of our meeting.

(2) That we express to the officers of the Iowa Ornithologists' Union, and especially to Dr. T. C. Stephens and Philip A. DuMont, our appreciation of their efforts in arranging the splendid program presented to the convention.

(3) That we extend our thanks to the several speakers who have presented so many worth-while matters for our consideration.

(4) That we acknowledge our appreciation of the opportunity of again meeting with the Nebraska Ornithologists' Union.

(5) That it is the feeling of this convention that in the death of Mrs. A. J. Palas, a charter member of the Union, our Association has lost a most valuable member, and every wildlife creature has lost a sincere friend; that the Secretary be instructed to send a copy of this resolution to Mr. A. J. Palas, with the assurance of our deepest sympathy.

(6) That in the passing of Prof. J. E. Guthrie our Association has lost a devoted member, the youth of the State have lost a great teacher, and Conservation has lost a true friend; that our Secretary send to Mrs. Guthrie and family a copy of this resolution with an expression of our sympathy.

(7) That our Secretary be instructed to write to Mrs. Rosene, expressing to her our sympathy and assuring her that in this convention we have been thoughtful of her and hope for her an early recovery.

(8) That we highly commend the thoughtful and painstaking work of Fred J. Pierce in behalf of the Union and in making 'Iowa Bird Life' a pleasant visitor in our homes.

(9) That we approve the splendid work of Jay N. Darling, Chief of the Biological Survey; we especially approve of his efforts to prevent the extinction of our migratory water-fowl and we pledge him our loyal support in any measure he may find it necessary to take for their preservation in their present crisis.

(Signed) O. S. Thomas, Chairman
J. Wilbur Dole
A. J. Palas

ATTENDANCE REGISTER

COLORADO: ESTES PARK, Joe Mills.

IOWA: ALTON, W. S. and Mrs. Florence Slagle; AMES, Dr. and Mrs. P. L. Errington, J. R. Fitzsimmons, Dr. G. O. Hendrickson, S. T. Runkel, B. V. Travis; ARMSTRONG, W. J. Knipe; ATLANTIC, Ivan Boyd, Robert Sherwood; CEDAR FALLS, Miss Winifred Gilbert; CHEROKEE, Henrietta Hass; CLEAR LAKE, Ralph Schneider; DES MOINES, L. J. Bennett, I. T. Bode, Mr. and Mrs. A. F. DenBoer, P. A. and Mrs. W. G. DuMont, Mrs. Henry Frankel, Bob Grant, A. J. Palas, Ross Teuber; FAIRFIELD, J. Wilbur Dole, Malcolm McDonald; KEOKUK, Frank Johnson, M. J. Martin, H. J. Nelson, E. H. Purcell, Mrs. H. J. Robertson, W. L. Talbot; KNOXVILLE, C. H. Batton, F. M. Frederickson, Dan Nichols, Lloyd Smith; NEW SHARON, W. H. Bartlett; OGDEN, Walter M. and Walter Rosene, Jr.; PIERSON, W. R. Mills; ROCK RAPIDS, Rose Julien, Mr. and Mrs. O. S. Thomas; SALIX, N. J. Jaurow; SERGEANT BLUFF, Mrs. Fred Colby; SIOUX CITY, Mrs. W. J. Armour, Mrs. Mary Bailey, Mrs. Edith Bareman, E. D. Beck, W. D. Crabb, Anna Christianson, Mrs. Marie Dales; Mr. and Mrs. W. R. Felton, Fannie Foster, J. H. Frenchick, W. D. Hayes, Mr. and Mrs. R. D. Hissong, Mrs. G. E. Hill, Mamie Hulett, Alfreda Jensen, Mr. and Mrs. T. M. Murdoch, I. G. Nore, Robert O'Brian, Helen Peterson, Mrs. A. N. Sloan, Grace Smith, Mrs. C. F. Smith, Dr. and Mrs. T. C. Stephens, W. W. Trusell, Wm. and Harriet Wachter, Wm. Youngworth; TAMA, Mrs. Edna Ennis, Mrs. W. G. MacMartin; WASHTA, Dorothy L. and F. G. Bliss; WATERLOO, John Bliese, R. C. Porter.

KANSAS: LAWRENCE, W. S. Long.

MINNESOTA: MADISON, Mrs. C. E. Peterson; MINNEAPOLIS, W. J. Breckenridge, Gustav Swanson, Dr. T. S. Roberts; WINONA, R. C. Steele, Geo. Tonkin.

MISSOURI: BETHANY, Mr. and Mrs. F. G. Bell, COLUMBIA, Dr. Rudolf Bennitt, Dr. and Mrs. M. M. Ellis.

NEBRASKA: AURORA, Mrs. Glen Chapman; FREMONT, Mrs. Lily Button; HASTINGS, Mrs. A. M. Brooking, Mrs. A. H. Jones; LINCOLN, Mr. and Mrs. G. E. Condra, Mrs. O. D. Corey, Mr. and Mrs. L. M. Gates, J. H. Hatten, W. J. Himmel, Mrs. Lottie Krumann, F. B. O'Connell, Mrs. Addison Sheldon, Mr. and Mrs. Geo. Smith, Prof. and Mrs. M. H. Swenk; MACY, W. R. Lewis; OMAHA, Mary Ellsworth, H. E. Hart, L. O. Horsky, Victor Overman, Elizabeth Rooney; PONCA, W. G. Dahms; SUPERIOR, Mrs. H. C. Johnston, Mrs. Geo. Scoular; SOUTH SIOUX CITY, Miss Marie E. Meyer, Mrs. H. A. Milne, W. E. White; TEKAMAH, E. A. Danielson, Alfred Jensen; WALTHILL, Wilhelmina Feemster, Mr. and Mrs. R. C. Gramlich.

NEW YORK: NEW YORK CITY, John H. Baker.

SOUTH DAKOTA: MITCHELL, Dr. A. V. Arlton, J. N. Ball.

WISCONSIN: LA CROSSE, Mr. and Mrs. Ernest G. Holt.

BIRDS SEEN ON THE FIELD TRIP

Loblolly Lake and vicinity, Union County, South Dakota; May 12, 7 A. M. to 12 M.

White Pelican, Mallard, Gadwall, Baldpate, Pintail, Blue-winged Teal, Shoveller, Redhead, Canvas-back, Scaup Duck, Cooper's, Red-tailed and Marsh Hawks, Bob-white, Ring-necked Pheasant, Sora, Coot, Piping and Semipalmated Plovers, Killdeer, Spotted, Solitary, Pectoral, Least and Semipalmated Sandpipers, Greater and Lesser Yellow-legs, Wilson's Phalarope, Ring-billed and Franklin's Gulls, Black Tern, Mourning Dove, Chimney Swift, Flicker, Red-bellied, Red-headed, Hairy and Downy Woodpeckers, Eastern and Ark. Kingbirds, Phoebe, Crested, Alder and Least Flycatchers, Tree, Bank, Rough-winged, Barn and Cliff Swallows, Purple Martin, Blue Jay, Crow, Chickadee, Tufted Tit-

mouse, White-breasted Nuthatch, House Wren, Catbird, Brown Thrasher, Robin, Wood, Olive-backed and Gray-cheeked Thrushes, Bluebird, Ruby-crowned Kinglet, Migrant Shrike, Red-eyed and Warbling Vireos, Black and White, Prothonotary, Tenn., Orange-crowned, Nashville, Yellow, Myrtle and Black-poll Warblers, Oven-bird, Grinnell's Waterthrush, Northern Yellow-throat, Redstart, English Sparrow, Western Meadowlark, Yellow-headed and Red-winged Blackbirds, Orchard and Baltimore Orioles, Bronzed Grackle, Cowbird, Scarlet Tanager, Cardinal, Rose-breasted Grosbeak, Goldfinch, Towhee, Vesper, Lark, Chipping, Clay-colored, Field, Harris's, White-throated, Lincoln's and Song Sparrows. Total, 101 species.—F. J. P.

GENERAL NOTES

Passenger Pigeon Specimens.—In a letter from Norman A. Wood, Emeritus Curator of Birds at the Museum of Zoology, University of Michigan, Ann Arbor, on December 5, 1933, he stated that the immature male specimen of Passenger Pigeon which W. E. Praeger had secured at Keokuk, Lee County, on September 17, 1896, is now in their museum. It should be noticed that this specimen is labelled September 17 instead of the 7th, as recorded in 'The Revised List of the Birds of Iowa.' Another specimen, a fine adult male, was acquired by the museum from the former J. M. Shaffer of Fairfield. This bird was labelled as being taken at Fairfield, Jefferson County, Iowa, about 1896.—PHILIP A. DU MONT, Des Moines, Iowa.

Bewildered Longspurs.—"What's the matter with the birds?" was an oft-repeated question heard on the streets of Spirit Lake, Estherville and Spencer, Iowa, on Saturday evening, January 5, 1935, when hundreds of Lapland Longspurs were attracted to the lights in these towns and flew about for several hours. It was suggested that the birds were flying ahead of the cold wave that reached Iowa a short time later. There had been a little snow, enough to give the ground and buildings a white covering. In Spirit Lake, strings of white lights across the streets shone on the snow, and the reflection on the sky attracted the feathered travelers.

The actions of the birds caused practically every shopper to make some inquiry about them. The number of longspurs in Spirit Lake was estimated at about 700 between the hours of 6:00 P. M. and midnight. All through the early part of the night, until the bright lights were extinguished, the bewildered birds flew about the lights like moths around a candle. Many were stunned and fell fluttering to the street, to add to the general commotion of a busy Saturday night in an Iowa country town. It was estimated that at least 100 were fatally injured before the lights went out. The scene was duplicated at Estherville and Spencer. At Estherville one bird lover gathered up a number of the injured longspurs and cared for them in the basement of her home until they were again able to travel.—HOWARD GRAESING, Spirit Lake, Iowa.

Winter Visitors.—On January 22, 1935, I heard the cheerful, questioning whistle of a Cardinal, its first known winter visit to my home. This bird is becoming well established in the more timbered areas along the Little Sioux River. I remember the happy thrill I received in the summer of 1931 when, after several drowsy hours of watching the fish-line bobber on this stream at a point north of Washta, I saw a flash of flame color reflected in the river's mirror beneath my cane pole. I raised my eyes in time to see a brilliant, full-crested male Cardinal disappear into the June jungle of willow growth. This was the first Cardinal I had seen since moving from Iowa City some years before.

Mild winter weather resulted in an early return of several summer residents to this section. Meadowlarks were seen in the pastures on January 5, 1935; a Flicker was looking for ants about a rotted stump on February 9; and the first Robin came on Valentine's Day, a new "earliest" record. The usual large flocks of Prairie Horned Larks and juncos were not in evidence at any time, although there was a small migration occurring in mid-December.

When calling upon a farmer in December, 1934, I was shown the frozen carcass of a Bald Eagle, in immature plumage, lying atop a cage containing a red fox. In the cage, also, were the remains of three or more hawks, all apparently of species considered worthy of protection. Two Bald Eagles, not yet wearing the white head-dress, were observed west of Schaller, near highway No. 21, on January 6, 1935. These birds were seen several miles apart; both were in tall cottonwoods and were disdainful of my close observation. This indifference of young birds perhaps accounts for so many killed by gunners with itching trigger-fingers.—FRED G. BLISS, Washta, Iowa.

PRESIDENT HENDRICKSON'S LETTER

Fellow Members of the Iowa Ornithologists' Union:

I did not expect to write a third time as your President, but the members present at Sioux City elected me again, and as I thought they knew more reasons for my taking the office in 1935-6 than I could originate against serving, I accepted. We had a splendid meeting at Sioux City. The papers were very good and well read.

Because we are getting along so well, let's continue our efforts to add new members and new local groups to the Union. Let each member consider himself or herself a committee of one to visit another town or city, call on the bird observers, and tell about our organization. Get them together and organize a local group like the one to which you belong. Such work makes fine summer sport for you older members. And offer to lead the novices on a field trip. That really gets up the interest. That was what started me onto bird study. A man who knew birds quite well asked several of us boys at college if we cared to take an early bird hike, and it proved to be such a delightful experience that I have never been able to forget bird study since that day.

Financially, we are sound but not opulent. We could-enlarge the magazine and print more pictures if we could collect a few more dollars. Mr. Pierce, in addition to being a tactful, careful and accurate Editor, is also a very successful advertising solicitor. With increased membership we would have increased circulation which attracts more advertising which makes possible a larger magazine. Thus the circle widens.

Every county seat in Iowa should have a bird club affiliated with our Union. Many smaller towns might organize a club at the High School. A few parents and a few boys and girls in their 'teens could study birds together very nicely. And no doubt the school library could provide several excellent books (such as those advertised in 'Iowa Bird Life' during the past year) for the whole school as well as the club. As a former Superintendent I can say that I always appreciated such really worthwhile coöperation on the part of parents. Without doubt your Superintendent will entertain your suggestions on the subject of organizing a bird club.

And 'Iowa Bird Life,' your magazine, will print your stories about birds. Which birds are you seeing? Look particularly for unusual birds nesting in your vicinity. How numerous are the Starlings around you? Write to Mr. Pierce concerning your observations.

Yours for another good year.

GEORGE HENDRICKSON

NECROLOGY

Dr. Clyde Ernst Ehinger, a well-known bird student and a member of the Iowa Ornithologists' Union for several years, died at his home at Keokuk, Iowa, on January 3, 1935, following an illness of heart trouble.

He was born at Franklin Center, Lee County, Iowa, on March 11, 1858, and spent his early life in that county. In 1876 he entered the University of Iowa. There he studied medicine for two years, after which he went to Chicago and finished his medical training. As a physician he practiced in Chicago and Quincy, Ill., and later in Keokuk.



DR. CLYDE E. EHINGER

In about 1888 he decided to take up the study of physical training and hygiene. With his wife he took a course at Brooklyn, N. Y., and after finishing it they taught for thirty years in the Normal School at West Chester, Pa. They resumed their residence in Keokuk in 1925.

Dr. Ehinger was actively interested in bird study for many years of his life. He did much serious work in ornithology and considerable writing. The local newspapers of his home published much interesting material from his pen. One of his chief interests was the work of organizing bird clubs among the boys in various parts of the country where he lived. He was a lecturer of ability and was in demand as a speaker on bird and nature subjects. The contacts he established and the enthusiasm he engendered among the young men of many states resulted in a wider appreciation of wild life and the formation of numerous bird club groups. This was a most fruitful work. A fellow townsman said of him: "Dr. Ehinger

was a man of very friendly and kindly nature, enjoying himself especially when surrounded by his friends. Although a man whose personal business was at times exacting, he nevertheless was always willing to help others, even in the most unimportant matters"

At our Cedar Rapids meeting in 1931, the last of our meetings that he attended, he spoke on "The Importance of Ornithological Instruction for Youth"—the subject to which he had given so much attention during his life. His fine library of more than 300 volumes on ornithology was left to Iowa State College Library, Ames.—F. J. P.

Professor Joseph Edward Guthrie, of the Department of Zoology and Entomology, Iowa State College, Ames, passed away shortly after 8 A. M. on April 16, 1935, while lecturing to a class of students in Bird Study. His death was due to a sudden heart attack. On the previous Saturday Professor Guthrie had assisted in the entertainment of several hundred High School students at the college. His particular part was the management of a bird identification contest and the exhibit of the many mounted bird skins that he had prepared in the

past years and placed in special boxes that many of you have seen at Ames. On that last Monday morning he had just finished telling his



PROFESSOR GUTHRIE

class about the great fun he had on the previous Saturday, and he had just commented on the splendid behavior and scholarly attitude of the young people who had come to the contest, when he was called away.

So had he lived. Always of service to others, always the optimist, forever young with young people, always quick to see and point out the good ways in which events were trending.

Joseph Edward Guthrie was born at York, New York, September 24, 1871. He graduated from the LeRoy, New York, High School in 1895, and from the University of Minnesota he received the degree Bachelor in Science in 1900 and the degree Master of Science in 1901. Zoology and entomology embraced his major interests in college. His master's thesis on the Collembola of Minnesota was published by the University in book form and stands as one of the finest works of entomological research. As an instructor he began his work at Ames in 1901.

At Iowa State College the ever-growing classes in zoology took up the major portion of his time. In more recent years embryology, fish and game, bird study and agricultural zoology were his major courses. Always a few advanced undergraduate and graduate students worked with him on the many varied problems pertaining to wildlife which his curious and keen mind saw at all sides in Nature. As the senior Professor and admitted by all as the best teacher in the department, Professor Guthrie was the sage in zoology to all of his co-workers on the Campus. His omnivorous reading habits and his continual prying into the structural and physiological features of animal life made of him a veritable storehouse of knowledge, which he joyfully and eagerly dispensed to all questioners.

As a teacher he sat down beside the student. He looked at the specimen with the learner. He led the novice into questions and answers in such a manner that the student felt that he had taught himself. Professor Guthrie's lectures were high-lights in the lives of his students; they were the talk of the Campus. Adept at the blackboard with chalk, expert in modelling with clay, and original in the fashioning of models from plaster paris and balsa wood, the Professor was able, with his many visual devices, as well as his enthusiastic, clear verbal presentation, to put before his students a picturization of animal behavior that could never be forgotten.

The Professor was the author of several bulletins at the college, chief among which are: 'Summer Birds of an Iowa Farm,' 'Snakes of Iowa,' and 'Control of the Garden Mole.' In addition he published a large number of short articles and notes on reptiles, birds, and rodents. He was a charter member of Iowa Ornithologists' Union, and

a member of Wilson Ornithological Club, Iowa Academy of Science, and several other scientific societies. As a scholar he received recognition by election to Phi Kappa Phi, Sigma Xi, and several other honorary societies.

Professor Guthrie was an exemplary citizen. He devoted many hours to assistance with Boy Scouts and similar organizations in their Nature lessons and examinations. For many years he was a member of the Congregational Church and was clerk of the Ames church for the past 14 years.

He is survived by the widow Emma B. Guthrie, resident at 319 Lynn Avenue, Ames, a daughter Jean, Assistant Editor of 'Better Homes and Gardens,' Des Moines, and a son Charles employed at Chicago.

At the college Professor Guthrie left more than a thousand mounts of bird skins, animal skeletons and skulls, and models in plaster, paraffin, wax and balsa wood of animals and parts of animals. This great heritage of superior teaching devices, the outlines of his well organized courses and his complete lecture notes have been passed on to younger instructors to testify to the exact pains Professor Guthrie took to see that his work would continue to live long after his passing. So he has not left us; he seems to be with us yet.—G. O. H.

RECENT BIRD BOOKS

THE HAWKS OF NORTH AMERICA. by John Richard May (Natl. Assn. of Audubon Societies, 1775 Broadway, New York, 1935; cloth, pp. i-xxxiv+1-140; price, \$1.25).

As an opening wedge in an intensive educational campaign by the Audubon Societies, this book is of timely importance. The subject of hawks has always been one of many controversial questions, which this volume will go far toward settling. Distribution of the book at a price far below the cost of publication was made possible by the beneficence of a member of the Audubon Societies. A wide circulation is thus assured, and the public will be greatly benefited by having a reliable work on hawks within easy reach. Much credit is due the sponsors and the author of the book.

In 1893 Fisher's pioneer volume on hawks and owls was published. It presented a review of all facts gathered up to that time. During succeeding years ornithologists have carefully studied the habits of the raptorial birds and have accumulated a great store of data. The present volume summarizes the vast collection of material and puts into readily accessible form the important facts concerning all hawks found in North America.

In an introductory chapter Dr. May takes up the hawk's place in nature and outlines the various agencies that have contributed to the decrease of hawks. Natural causes are not considered important factors in this decrease; but Man's wanton destruction is largely responsible for the hawks' rapid decline within recent years. Several species are threatened with extinction, and there is a serious shortage in the numbers of many others. The educational campaign is for the purpose of acquainting thoughtless people with the true worth of the hawks so that much unnecessary killing may be eliminated. A discussion of field identification, illustrated by four uncolored plates showing hawks in flight by Roger Torv Peterson, concludes this chapter.

Every hawk known to occur in North America is described. The individual treatment includes identification and feeding habits—the two angles which are most important in this educational work. The paragraphs given for identification are adequate, while the descriptions of feeding habits are convincing though concisely written. Range maps are included. In an appendix a list of state laws relating to hawks is given, and there is also a good bibliography. The most at-

tractive, and perhaps the most useful, feature of the book is the series of 37 colored plates by Major Allan Brooks. With scenic backgrounds all of the plates are artistically pleasing, in addition to being accurate likenesses of the hawks they depict. The book is printed on heavily enameled paper and is excellently bound.—F. J. P.

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A GUIDE TO BIRD SONGS, by Aretas A. Saunders (D. Appleton-Century Co., New York, 1935; semi-flexible cloth, pp. i-xvii+1-285; price, \$2.50).

Some of us have had the good fortune to go on field trips with a bird expert who is able to name all the birds whose songs he hears. The faintest chirp or call note is caught by his trained ear and is immediately identified. No note escapes him. Such assistance when available is a great benefit to the average worker. Most bird students, however, have not had the help of an expert. By hard work and many hours of patient stalking they have built up their knowledge of bird songs. It is for the non-professional bird student in need of the advice of an expert, that Mr. Saunders has prepared this new handbook.

The 'Guide to Bird Songs' is, we believe, the most practical work on this subject that has ever been published. It is unique in that it records bird songs with a series of diagrams. Musical notation is not used, so a knowledge of music is not required of those who use the book. The author refers to his method as "musical shorthand," and he reduces bird songs to a system of diagrams somewhat suggestive of shorthand, though easily understood. The principles are fully explained. Each character has a definite meaning and progression. When the fundamentals are firmly fixed in the mind, the student is prepared to go into the field and identify the songs he hears by consulting this handbook. The 'Guide' will not settle all difficulties in identification, and there is a possibility of failing to ascribe certain songs to the proper singers; but we believe that this book offers the most workable method of identifying unseen singers, and most bird students will find it a distinct aid in their work.

Mr. Saunders takes up the songs of nearly 150 birds of the Eastern United States, which includes most of our distinctive songsters. He gives a brief description of the color marks of each bird, followed by a full account of its singing habits and the characteristics of its song, with a diagram and syllabic notation accompanying. There are 163 diagrams in all. The book contains a 20-page 'Key to Bird Songs,' which is a detailed and comprehensive auxiliary feature. An index lends further accessibility to the text. The book is of a convenient size for carrying in the field and will prove a worth-while addition to the usual field equipment.—F. J. P.

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The Sioux City Bird Club is issuing a mimeographed bulletin. Vol. I, No. 1 appeared in September, 1934, under the title of 'Sioux City Bird Study Club Review.' Vol. I, No. 2 was issued in April, 1935, as 'The Dickcissel.' It contains current news items and bird notes of interest. Many local bird clubs in other states issue mimeographed bulletins in serial form. The circulations of many of them are so limited that their dropping from sight within a few years is almost a certainty—which presents a serious problem for the bibliographer of the future.

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New Members.—Chas. H. Batton, Knoxville; Mrs. Ray S. Dix, Cedar Falls; Fred M. Frederickson, Davton; Miss Elizabeth E. Hoyt, Ames; W. J. Knipe, Armstrong; Dan Nichols, Corning; Sylvan T. Runkel, Ames; Ralph F. Schneider, Clear Lake; Lloyd Smith, Knoxville.